

## Patent Claims

1. A poker vibrator with
- vibration unit (2) in which an oscillator with an electric motor is located;
  - 5 - a switching unit (3) separated from the vibration unit (2) through an elastic connection (1) and with
  - a measurement device (6) to detect at least one operating parameter of the poker vibrator device:
- characterized in that the operating parameter is a parameter from the group consisting of the motion of
- 10 the vibration unit (2), the oscillatory amplitude of the vibration unit, its oscillatory frequency, the power consumption of the electric motor, the electric excitation frequency of the electric motor and the winding temperature of a stator of the electric motor.
2. A poker vibrator according to claim 1, characterized in that an evaluation circuit is provided to
- 15 feed the measurement device (6) and to evaluate signals sent by the measurement device.
- 3 A poker vibrator according to claim 1 or 2, characterized in that the measurement device includes at least one motion measurement device (6) provided within the vibration unit (2).
- 20 4. A poker vibrator according to claims 2 and 3, characterized in that the evaluation circuit is provided inside the switching unit (3) to feed the motion measurement device (6) and evaluate the signals sent from the motion measurement device (6).
5. A poker vibrator according to claim 3 or 4, characterized in that the motion measurement
- 25 device is an acceleration detector (6).
6. A poker vibrator according to claim 1 through 4, characterized in that the measurement device has two acceleration detectors (6) provided inside the vibration unit (2) whose measurement directions (7) are perpendicular to one another and to a longitudinal axis (8) of the vibration unit (2).

7. A poker vibrator according to one of the previous claims, characterized in that the measurement device includes at least one power measurement device.

5 8. A poker vibrator according to claim 7, characterized in that the power measurement device is coupled to the evaluation circuit to determine the electrical power consumed by the oscillator.

9. A poker vibrator to densify a flowing material with

- a vibration unit (2) in which an oscillator with an electric motor is located;
- 10 - a switching unit (3) separated from the vibration unit (2) through an elastic connection (1);
- a measurement device (6) to detect the RPM of the electric motor; and with
- an evaluation circuit to evaluate measured values detected by the measurement device;

characterized in that the evaluation circuit has evaluation algorithms to determine a change in the  
15 densification state of the material by means of the measured values and thus from a change in the RPM of the electric motor.

10. A poker vibrator according to one of claims 2 through 9, characterized in that the evaluation circuit involves a neural network or a fuzzy logic system.

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11. A poker vibrator according to one of claims 2 through 10, characterized in that an optical and/or acoustic display (9) is provided at the switching unit (3) that is controlled by the evaluation circuit.

25 12. A poker vibrator according to one of the previous claims, characterized in that the switching unit includes a switch housing (3) in which a power switch (5) and/or a frequency converter is provided.